

Title (en)  
An optical device and an optical lens

Title (de)  
Optische Vorrichtung und optische Linse

Title (fr)  
Dispositif optique et lentille optique

Publication  
**EP 1795863 A3 20070627 (EN)**

Application  
**EP 06256198 A 20061205**

Priority  
• US 74253205 P 20051206  
• US 58593106 A 20061025

Abstract (en)  
[origin: EP1795863A2] A non-cylindrically surfaced lens converts a collimated light beam into a light plane that increases a light intensity toward distal portions of the light plane's arc so as to substantially uniformly project a reference light line onto a reference surface onto which the light plane is projected. The non-cylindrically surfaced lens has first and second surfaces that remain constant over at least a portion of the z direction length of the lens. The second surface defines a multiple-radius curve in an x,y plane. The lens may be incorporated into a self-leveled optical device that projects a reference light line onto a reference surface at a predetermined angle relative to horizontal.

IPC 8 full level  
**G01C 15/00** (2006.01)

CPC (source: EP US)  
**G01C 15/004** (2013.01 - EP US); **G02B 3/02** (2013.01 - EP US); **Y10S 33/21** (2013.01 - EP US)

Citation (search report)  
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**EP 06256198 A 20061205**; CN 200610164204 A 20061205; JP 2006327758 A 20061205; TW 95145163 A 20061205; US 58593106 A 20061025